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COUNTERFACTUALS: REPLY TO CLAUDIO PIZZI

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Abstract: After some preliminary remarks in §1, I argue in §2 that Claudio's considerations about my treatment of Quine's Bizet-Verdi counterfactuals do not constitute a difficulty for the structural analysis of such counterfactuals. I discuss some of his other examples and argue that counterfactuals are ambiguous both structurally and contextually. I conclude with an examination of the principle of transitivity for counterfactuals.

Key-words: Counterfactual conditionals. Structural ambiguity. Contextual ambiguity. Transitivity. Quine. Goodman.

Claudio's interest in conditionals and related matters quickly led him to zero in on my note 23 (pp. 73-4) on counterfactuals. I wrote another long note 38 on counterfactuals in my paper "Ockham's Razor" – a preliminary version of Chapter 24. In the latter I declare my sympathy for Goodman's approach to counterfactuals, while at the same time criticizing his specific formulations in "The Problem of Counterfactual Conditionals". Thus Claudio's surmise in p. 58 that I might be sympathetic to the "consequentialist" approach to counter-

factuals is correct.¹ I am glad that Claudio chose to comment on this problem because even though note 23 is a side remark, the problem of counterfactuals was one of the motivations for my approach. Before I get into the thick of it, however, I want to make three remarks about Claudio's preliminary comments.

1. PRELIMINARIES

Claudio's initial comments on states of affairs in p. 56 may suggest that I consider properties to be sets,² which is not the case. As I say in p. 61, I use sets merely as an illustration.

Claudio also quotes a passage where I say that if all terms in a sentence denote, then the different interpretations of its structure are materially equivalent. Although I did not qualify this claim, it only holds for extensional sentences. And even for extensional sentences it does not hold if these sentences are imbedded in an intensional context such as the context of counterfactual inferences.

Finally, referring to my example

(3) John reasons like Sherlock Holmes,³

Claudio questions my strategy that (3) may be either true or false when we interpret the predicate as 'x reasons like Sherlock Holmes' but not when the name 'Sherlock Holmes' appears in subject position. His argument is that whereas 'Holmes = Holmes' "should be universally

¹ He is also correct in saying that I have not been influenced by the possible worlds approach to counterfactuals, originally developed by Stalnaker and by Lewis. This is partly because I am not too keen on possible worlds and partly because I find the assumption that there is some kind of proximity measure between possible worlds extremely implausible.

² He says "... a property (*i.e.*, a set) ...".

³ Unless I say otherwise I will use Claudio's numbering in my reply.

true” it has allomorphs⁴ with the non-denoting term ‘Holmes’ in subject position. The problem is that for me these identities with non-denoting terms are *not true* no matter which allomorph one takes.⁵ In particular, I argue in p. 55 that Quine’s strategy for eliminating names is faulty for precisely this reason. Quine would like to eliminate the name ‘Holmes’ in favor of a predicate ‘ $x = \text{Holmes}$ ’ or ‘ x is-Holmes’. The point I make against him is that given that ‘Holmes’ does not denote we have no applicability conditions for ‘ $x = \text{Holmes}$ ’ or for ‘ x is-Holmes’.⁶ This is the difference with the predicate ‘ x reasons like Sherlock Holmes’ which *has* applicability conditions given by the Conan Doyle stories.

2. COUNTERFACTUALS

Referring to examples (4a) and (4b), Quine writes in *Methods of Logic*:

It may be wondered, indeed, whether any really coherent theory of the contrafactual conditional of ordinary usage is possible at all, particularly when we imagine trying to adjudicate between such examples as these ... (Quine, 1972, p. 21)

Later in *Word and Object* he gives a more positive description of the problem:

The subjunctive conditional depends ... on a dramatic projection: we feign belief in the antecedent and see how convincing we then find the consequent. What traits of the real world to suppose preserved in the feigned world of the contrary-to-fact antecedent can be guessed only from a sympathetic sense of the fabulist’s likely purpose in spinning his fable. (Quine, 1960, p. 222)

⁴ Although I like the term ‘allomorph’, one should be careful not to conclude that the difference between allomorphs is merely one of *emphasis*.

⁵ See also the last part of §2 in my reply to Marco Ruffino.

⁶ See also the discussion in Chapter 11, pp. 382-84.

This is precisely right, and the problem is to formulate it in a more general and abstract way.

When we make a counterfactual assumption we are *abstracting* from some actual aspects of the world. What are these aspects? How can we indicate them? Can we do this in a way that is relevant to the question as to which traits of the real world should be preserved and which traits should not be preserved? This is how I see the problem of counterfactuals, and it consists essentially of Goodman's problem of relevant conditions interpreted in the light of Quine's remarks.⁷

Let us now consider the Bizet-Verdi counterfactuals. My idea is that in (4a) and (4b) we are abstracting on *both* Bizet and Verdi and assuming them to be compatriots. What follows when we spin our fable? Since we are assuming them to be compatriots it follows (by definition) that they would have the same nationality, but since we are abstracting on both of them, the specific traits that Bizet is French and that Verdi is Italian would not be (necessarily) preserved. Hence we cannot reach the conclusion of either (4a) or (4b). In (5a), on the other hand, we are only abstracting on Bizet, and assuming him to have the same nationality as Verdi – whose properties we should keep fixed except insofar as they are affected by the abstraction on Bizet. Hence, since Verdi *is Italian*, we should be able to conclude that Bizet *would have been Italian* as well. And similarly for (5b).

Let me now represent the form of these counterfactuals by means of a different notation than the one I use in the book:

$$(4d') C_{\underline{bv}} \rightarrow I_{\underline{b}}$$

$$(4b') C_{\underline{bv}} \rightarrow F_{\underline{v}}$$

⁷ There is also the problem of law-like generalizations that Goodman emphasizes.

(5a') $C_{\underline{b}v} \rightarrow I_{\underline{b}}$

(5b') $C_{\underline{v}b} \rightarrow F_{\underline{v}}$

The underlining indicates on whom we are abstracting but leaves implicit the property that is attributed. The notation in the book is clearer in this respect, indicating that in the first two the property is $[Cxy](x,y)$ whereas in the other two it is $[Cxy](x)$ and $[Cxb](x)$, respectively.⁸

One of the points that Claudio makes on the basis of (MP1) is that I should also accept

(5a+) If Bizet had been a compatriot of Verdi, then Verdi would have been a compatriot of Bizet.

From which it would seem to follow by (MP2) that I should accept

(5a++) If Bizet had been a compatriot of Verdi, then Bizet and Verdi would have been compatriots,

as well. If we now consider some of the other counterfactuals that I accept and that I reject, things would seem to get pretty chaotic – as Claudio goes on to point out.

I *do* accept (5a+) and (5a++), but in spinning our fable *we must keep track of the abstractions*. I would reformulate (5a+) and (5a++) as follows with the notation that I introduced above:

(5a+') If Bizet had been a compatriot of Verdi, then Verdi would have been a compatriot of Bizet.

⁸ In a general treatment of counterfactuals one would have to develop these notations further.

(5a++)' If Bizet had been a compatriot of Verdi, then Bizet and Verdi would have been compatriots.

The point is that, given the abstraction that is made in the antecedent of (5a+), the reason that Verdi would have been compatriot of Bizet is that Bizet *would have been Italian* and Verdi *is Italian*—and essentially the same reasoning applies to (5a++). The conclusions that we cannot draw are:

(5a+''') If Bizet had been a compatriot of Verdi, then Verdi would have been a compatriot of Bizet.

(5a++''') If Bizet had been a compatriot of Verdi, then Bizet and Verdi would have been compatriots.

This suggests that Claudio's formal considerations in pp. 59-62 about which general principles⁹ I do (or should) accept for counterfactuals do not really apply to these examples because the allomorphs cannot be treated as if they were the *same* sentence (or materially equivalent sentences).

Claudio then concludes:

... I would like to suggest that counterfactuals are indeed infected by ambiguity, but this ambiguity is not structural but contextual. In other words, what is essentially ambiguous in them is not so much the logical structure of the counterfactual supposition but the revision of the background knowledge which the supposition itself requires. (p. 62)

I actually think that it is *both*, and what I suggested is that the logical structure may help to indicate (even if not fully) what aspects of the background knowledge should or should not be revised. Moreover, I

⁹ I will come back to the question of general principles later.

think that in English (and in other natural languages) variations in word order are indicative of variations in background assumptions (some of which can be reflected in the logical structure – and this seems to me to be the case in (4*a*), (5*a*) and (5*b*).

To illustrate his point Claudio considers the examples (6*a*) and (6*b*). I could argue with these, but let me use Quine's actual examples instead:¹⁰

(6*a'*) If Caesar were in command, he would use the atom bomb;

(6*b'*) If Caesar were in command, he would use catapults.

In this formulation the ambiguity resides in that it is not clear whether we are considering a battle situation in our time or a battle situation in Caesar's time. There is an implicit time reference that is not shown in the antecedent, and there is a reference to a specific battle that is also not shown in the antecedent. Let us refer to the battle in question as 'this battle' and take it to be a present day battle. Take the following now:

(6*a''*) If Caesar were in command of this battle, he would use the atom bomb;

(6*b''*) If Caesar were in command of this battle, he would use catapults;

(6*a'''*) If this battle had taken place in Caesar's time and he was in command, he would have used the atom bomb;

¹⁰ These come immediately after the passage in *Word and Object* that I quoted above.

(6b''') If this battle had taken place in Caesar's time and he was in command, he would have used catapults.

In the first two counterfactuals we are abstracting on Caesar but not on the battle (except in relation to who is in command), and whether one or another (or neither) counterfactual is true will depend on how we spin our fable. In the last two counterfactuals we are abstracting on the battle and also on Caesar (but only in relation to the battle).

Claudio suggests that "it is difficult to imagine a situation in which catapults and atomic bombs are used in the same theater", but I can easily spin a fable for such a situation. The bare bones are as follows.

We are attacking a fortified enclave that we would like to wipe out. We happen to have small tactical atom bombs (about the size of a football) that if dropped on the enclave would wipe it out without consequences to us – even though we are fairly close to the enclave. Two questions arise: 'Should we use the atom bombs?' and 'How do we deliver them?' We can now imagine the following dialogue:

'If Caesar were in command, he would use the atom bombs.'

'Yeah? And how would he deliver them?'

'Well, how would Caesar have delivered something the size of a football across 150 yards? He would have used catapults, of course! So that's what he would do now.'

'O.K. Let's build one!'

Without disagreeing with Claudio that (6a'') is more plausible than (6b''), I think that the situation I described is one in which we can reasonably say (depending on considerations about Caesar as a strategist) that (6a'') and (6b'') are both true. With respect to (6a''') and (6b'''), I think that our conclusions will also depend on how we conceive the abstraction involved in the antecedent. If we are thinking of this battle being transposed to Caesar's time with all the weaponry

that is actually being used in it, then we might consider (6d'') to be true – and maybe (6b'') would then be even better justified. If, on the other hand, we are thinking of a battle *somewhat like this battle* taking place in Caesar's time with ancient weaponry, then (6d'') will be out of the question but (6b'') might be true.

The final example that Claudio considers is Goodman's famous match example (7). Here I disagree with Claudio that (11) is a legitimate counterfactual supported by (10). Goodman's problem of relevant conditions is really the problem of what information can be legitimately used in support of a counterfactual. *I.e.*, it is the problem of what actual facts *can* be used in support of the consequent of a counterfactual whose antecedent we are assuming. If we assume that match *m* had been scratched at a certain time *t* when it was not, then the information that *m* was not scratched at time *t* is obviously illegitimate. But so is the information that *m* did not light shortly after *t*, which is what is involved in (10). Moreover, given my earlier discussion, I also do not agree with Claudio's conclusion about the Bizet-Verdi example.

Let me comment now briefly on the question of general principles. Although I have thought a great deal about counterfactuals, I have not developed a formal theory about them. Hence I cannot say precisely which principles I accept and which principles I do not. But I will make a few remarks about one principle that Claudio mentions which has generated a lot of discussion; Transitivity.

Claudio concludes that I should not admit transitivity, but even though I have wavered a bit sometimes, I have generally thought that transitivity must hold for counterfactuals – and for subjunctives in general¹¹ – and I have never been convinced by the counterexamples

¹¹ In fact, I think that transitivity is a defining characteristic for any implication relation.

that I have seen. In his paper “Causality and the Transitivity of Counterfactuals” Claudio discusses Stalnaker’s example:¹²

(a) If J. Edgar Hoover were today a communist, then he would be a traitor.

(b) If J. Edgar Hoover had been born a Russian, then he would today be a communist.

Therefore,

(c) If J. Edgar Hoover had been born a Russian, he would be a traitor.

Claudio rejects the example on the grounds that there is an ambiguity between “American communist” and “Russian communist”. I agree, but I would put it in terms of the abstractions involved. In (a) we are abstracting on Hoover’s political affiliation and assuming him to be (secretly) a communist. Other properties of Hoover that are not affected by the abstraction should be kept fixed – in particular that he is director of the FBI. Therefore the consequent is quite reasonable. In (b) we are abstracting on Hoover’s place of birth and assuming him to have been born in Russia. It does not actually follow that he would be a communist, because his family could have immigrated to the United States when he was a small child and he could have had exactly the same professional career and political convictions that he in fact had. The idea behind (b) however, is that Hoover would have grown up in Russia and – given his personality, say – would have been a member of

¹² I am quoting Stalnaker’s original formulation (1968, p. 106) that was written when J. Edgar Hoover was still director of the FBI. Lewis also discusses a variation on this example in *Counterfactuals* (p. 33).

the communist party of the USSR. Let us interpret it this way. Does (c) follow with the antecedent interpreted with the abstraction as in (b)? Of course not, and the reason is that we are mixing up different situations involving different abstractions. In an argument such as (a)-(c) the context must be maintained throughout the argument – which I take to be also Claudio’s diagnosis.

All the examples that I have seen involve something like this, although in some cases they are a little harder to unmask. Alongside the Hoover example Lewis gives the following:

(d) If Otto had gone to the party, then Anna would have gone.

(e) If Anna had gone, then Waldo would have gone.

Therefore,

(f) If Otto had gone, then Waldo would have gone.

Lewis then tells the following story:

The fact is that Otto is Waldo’s successful rival for Anna’s affections. Waldo still tags around after Anna, but never runs the risk of meeting Otto. Otto was locked up at the time of the party, so that his going to it is a far-fetched supposition; but Anna almost did go. Then the premises are true and the conclusion false. (p. 33)

In this story we can also see how the proximity measure is supposed to work in these cases. Lewis says:

We must go further from actuality to find worlds where Otto went than to find worlds where Anna went. A Communist Hoover is nowhere to be found at worlds near ours, but a Russian-born Hoover is still more remote. (p. 33)

The story was set up so that the antecedent of (*d*) is “more far-fetched” than the antecedent of (*e*). (Why is it, by the way, that a Russian-born Hoover is *more remote* than a communist Hoover?)

I will not analyze Lewis’ example in detail but we can see that, as in the Hoover case, we must have stories and abstractions for the antecedents of (*d*) and (*e*) that *do not mesh*. If we assume that Otto went to the party, then we must assume that somehow he got away and (say) called Anna to go with him. In (*e*), on the other hand, we are supposed to assume that Anna went to the party while Otto was still locked up and that somehow Waldo was aware both of Anna’s going and of Otto’s being locked up. Whether we analyze it in terms of abstractions or in terms of ambiguity of context – or both – it seems to me that we are mixing up different interpretations.

So I agree with Claudio about transitivity, and I do not think that my treatment of counterfactuals will commit me to non-transitivity. Whether I can develop my ideas more formally in a satisfactory way remains to be seen.

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